

Joint Operation Planning and Execution System (JOPES) 2.7

JOPES OVERVIEW:

The era of single service operations is gone forever. All operations since Desert Shield/Desert Storm are and will be a collected effort of the joint community. Dwight Eisenhower stated, "Separate ground, sea, and air warfare is gone forever. If ever again we should be involved in war, we will fight it in all elements, with all services, as one single concentrated effort." The general population did not realize how prophetic these words would become in today's military environment.

In the early days of planning, the DoD had no structured procedure for planning. Each CINC planned a different way, using different formats and assumed all Joint military capabilities would be available for theater operations. As the need for joint operations became more of a reality, it became evident that a standard system was needed. This led to the development of our current system, The Joint Operation Planning and Execution System (JOPES). It is the integrated joint command and control system used to support military operation monitoring, planning, and execution (including theater level distribution) activities.

Within JOPES is the Time Phased Force Deployment Data (TPFDD). This lesson covers hardware and software of the system that supports the planning process. You will learn about the Global Command and Control System (GCCS) environment. You will learn why we have the Joint Operation Planning and Execution System (JOPES), its history, and its purpose. You will review the planning process for both deliberate and crisis action planning. With the implementation of GCCS, the old mainframe environment has been replaced by the client/server environment connected together with high volume network communication systems.

II. TERMS AND DEFINITIONS.

A. **Global Command and Control System (GCCS)** is an automated information system designed to support both deliberate and crisis action planning through an integrated set of analytical tools and a flexible data transfer capability.

B. **Joint Operation Planning and Execution System (JOPES)** is the integrated joint conventional command and control system used to support military operation monitoring, **planning**, and execution (including theater-level nuclear and Intelligence (C4I) system to support the war fighter, whether from a foxhole or from a command post. The war fighter can access a widely distributed, user-driven network for a single view of the military C4I. GCCS provides the communication connectivity that supports members of the Joint Planning and Execution Community (JPEC). From the war fighters' perspective, this is the technology that will support their conventional planning and execution

III. THE GLOBAL COMMAND AND CONTROL SYSTEM (GCCS) will provide the warfighter a fused picture of the battlespace. It is an important cornerstone for the midterm phase of the Command, Control, Communications, Computers and Intelligence for the Warrior (C4IFTW) concept.

GCCS will have the capability of meeting warfighter needs well into the 21st century. It incorporates the core planning and assessment tools required for the combatant commanders and subordinate joint force commanders and it will meet the readiness support requirements of the Services. GCCS moves the warfighter's joint C2 support capability into the modern era of open systems architecture by migrating largely preexisting systems and mission applications to a command operating environment. The standards and unifying approach that GCCS has established are essential for DOD components to successfully reduce the large number of systems in use today.

Background
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The World-Wide Military Command and Control System (WWMCCS), a mainframe system based on 1970's technology, has long been our "go to war" command and control system for force planning and deployment. During the 1980's a large-scale effort using classical acquisition strategies was under taken to upgrade the existing environment with new technologies. The approach proved cumbersome, while warfighter needs were increasingly unfulfilled.

In September 1992 the Under Secretary of Defense (Acquisition), terminated the WWMCCS ADP Modernization (WAM) Program. He directed that "a new acquisition approach" be used to fulfill critical command and control mission needs. The Assistant Secretary of Defense (C3I) subsequently established the Global Command and Control System as the principle migration path for defense-wide command and control systems, directing that GCCS rapidly and efficiently deliver to combatant commanders C2 capabilities through maximum use of commercial off-the-self and government off-the-shelf components. Further, he specified that the program evolves through continuous requirements refinement process to meet the goal of providing responsive C2 to combatant commanders.

GCCS has evolved from an initial baseline of existing C2 components. This baseline has served as the cornerstone for the rapid implementation of an initial system capable of fulfilling the most immediate user requirements and it will allow the shutdown of WWMCCS. As new GCCS versions are subsequently fielded, additional existing legacy systems will be replaced and secured. The command functional, physical and operational characteristics of GCCS are based on a single Common Operating Environment. All future Joint and Service/CINC unique mission applications must be compatible with this COE. We will retain a fully integrated, single GCCS, with all applications have a common look and feel

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Using Standard Data

The use of standard data elements is key to any automated system successes, especially command and control systems. Using standard data eliminates redundancies and provide a common base to facilitate information exchange, reducing time need to set up a basis for data communication. One of the results of stovepipe systems within the DOD was the proliferation of non-homogeneous databases. Although each system worked adequately within the particular component for which it was built, there was no interoperability with other components. Yet each component had information that needed to be shared with other components. The best solution to this untenable suitable is the use of standard data. The question was where to start.

The Services, combatant commands, and agencies answered that question by declaring that GCCS must, at a minimum, provide the same operational planning functionality that the WWMCCS provided via the Joint Operation Planning and Execution System (JOPES). The JOPES data model encompassed data requirements for many of the applications that would be included within GCCS. Clearly, the JOPES data model was the place to start standardizing data.

The Defense Information System Agency (DISA), acting for the Joint Staff, quickly developed a plan to approve over 1200 data standards define in the JOPES data model. The data standards were divided into nine logical packages and placed in directories as candidates for standardization. Data administrators from pertinent functional areas analyzed the data for usability, recommended modifications where needed, and finally declared the data as meeting approved standards. Future modifications and enhancements to GCCS and the other DOD functional area data will use these approved standards. The DOD had taken an important step in information exchange

Jones 2.7.2.4 GCCS Initial Operating Capability

GCCS will, among other functions, perform Joint command and control mission essential functions currently performed on conventional Worldwide Military Command and Control System (WWMCCS) ADP. GCCS performance and reliability for those essential functions will be equal to, or better than, current WWMCCS ADP. The Joint Staff, Director of Operations (J3), will declare GCCS initial operational capability (IOC) when GCCS can perform those mission essential functions. GCCS IOC requirements are:

Testing - A Continuous Process

GCCS testing is based on a process of continuously evaluating the comprehensive system. DISA, the operational users, and DOD Operational Test and Evaluation (DOT&E) will each evaluate GCCS to ensure its continued operational effectiveness and suitability. The testing process continues to track the progress of GCCS throughout its integration and installation phases. It occurs concurrently as additional functional blocks are added to the system. The process provides a complete, accurate, and timely evaluation of the system. The results from the testing support GCCS in three areas:

- 1. Providing input on systems/software nominated for "Best of Breed" selection process**
- 2. Providing information on how well a candidate system operates in the GCCS environment, supporting system integration decisions**
- 3. Providing feedback to determine satisfaction of user requirements and facilitate changes to GCCS**

The testing process verifies that GCCS meets the stated requirements of the users, from the National Command Authority to Joint Task Force commanders. It ensures that GCCS remains interoperable and fully integrated.

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"Best of Breed"

Mission application software nominated by a Service, combatant command, agency, or other DOD entity for inclusion in GCCS is known as candidate "Best of Breed" software. Candidates are submitted to functional working groups or to the System Integration Working Group (SIWG) for analysis.

The functional working groups identify and prioritize user requirements, then solicit nominations of existing applications from the Services, combatant commands, and agencies to satisfy the requirements. The working groups evaluate the nominated applications, both functionally and technically, before recommending an application to the GCC Review Board. The General/Flag Officers Advisory Board gives final approval to "Best of Breed" nominations.

The nominating organization of a selected "Best of Breed" application will usually remain the executive agent for that application, ensuring continuing support and technical expertise for users of the application.

JOPES 2.7.2.4.2

Training the Trainer

Rapid, responsive and quality training for GCCS users has been the challenge and cornerstone to successful implementation of GCCS. And the United States Air Force's Air Education and Training Command (AETC) and Joint Operation Planning and Execution System (JOPES) Training Organization (JTO) have risen to that challenge. An 8 August 1994 Memorandum of Agreement between the Joint Staff and Headquarters, United States Air Force, designated the Air Force as the GCCS single service training manager (SSTM).

The SSTM, located at Keesler Air Force Base, Mississippi, manages resources for GCCS technical training, including system, network, database administration, operating systems, and user training operations. Fixed classroom sites, mobile training teams, and documentation are available. Likewise, JTO located at Scott Air Force Base, Illinois, manages resources for all JOPES-related training through fixed classroom sites and mobile training teams.

Technical and JOPES-related training activities are coordinated through the SSTM and JTO, respectively; both of which are supported by military, DOD civilian and contractor trainers. Using a "train the trainer" approach, a cadre of personnel from each GCCS site receive formal training and then return to their sites around the globe to train additional personnel. This approach ensures an efficient, timely distribution of GCCS knowledge in harmony with rapid, nimble GCCS integration efforts.

Jones 2.7.2.5 Management Structure

The Global Command and Control (GCC) Management Structure outlines the structure, responsibilities, and decision flow process through which GCCS is managed. The GCC Management Structure is governed by the Chairman, Joint Chief of Staff Instruction 6721.01 (CJCSI 6721.01).

The GCC Review Board, chaired by J6, reviews requirements and issues, and forwards those requiring action to the GCC general/flag officers' Advisory Board. The Advisory Board, chaired by the Joint Staff Director for Operations (J3), approves new functionalities for GCCS, resolves issues, and provides the guidance for requirements, objectives, and milestones.

GCCS Program Management

The Secretary of Defense has directed that resources must support the initial operating capability of GCCS and components must program for the migration of functions from existing C4I systems to GCCS and DII. Services and agencies must ensure that GCCS supports combatant commands and the multi-regional conflict scenario and that it employs industry-standard specifications wherever possible.

Services and agencies have established GCCS Program Management Offices (PMOs) to implement GCCS. PMO responsibilities cover all Service and agency sponsored commands and organizations, including Unified Commands and Combined joint Task Force Commands to the lowest level requiring GCCS capabilities. GCCS PMOs meet together frequently to review issues and status.

JOPES 2.7.2.6 Planning and Execution System

The Joint Operation Planning and Execution System (JOPES) is the integrated command and control system used to plan and execute joint military operations. It is a combination of joint policies, procedures, personnel, training and a reporting structure supported by automated data processing on GCCS. The capabilities of the JOPES mission applications support translation of the National Command Authority's policy decisions into planning and execution of joint military operations. JOPES applications include:

Requirements Development and Analysis (RDA) creates, analyzes and edits Time Phase Force and Deployment Data (TPFDD).

Scheduling and Movement (S&M) handles command and control information on Deployment activity and status. It functions as a vehicle for the scheduling and Tracking movement of TPFDD requirements.

Logistics Sustainment Analysis and Feasibility Estimator (LOGSAFE) assists logistics planners in determining sustained movement requirements during deliberate and crisis action planning.

Joint Flow and Analysis System for Transportation (JFAST) is an analysis tool which provides users the ability to determine transportation feasibility of an Operation Plan (OPLAN) or Course of Action (COA).

Joint Engineer Planning and Execution System (JEPES) provides planners with a method to determine requirements and/or adequacy of engineering support provided in OPLANs or COAs. Medical Planning and Execution System (MEPES) provides contingency medical support information for allocating medical resources.

Non Unit Personnel Generator (NPG) functions are to assist in determining quantities of replacement and filler personnel.

Ad Hoc Query (AHQ) provides users with a means to develop, save, and print tailored queries extracting data from the JOPES core database.

Systems Support functions as the JOPES core database management subsystem for functional managers.

Airfields is an information retrieval application providing the user with the capability to access,

JOPE 2.7.2.7

Global Reconnaissance Information System (GRIS)

GRIS supports the planning and scheduling of monthly sensitive reconnaissance operations (SRO) theater requests. The Joint Staff staffs these requests through the office of the Secretary of Defense, Central Intelligence Agency, and State Department for National Security Council approval. Incoming RECON 1/2/3/4 formatted messages are received by an automated message handling system, validated, and passed to the GRIS application for automated processing and database update. GRIS generates all RECON messages and also monitors the monthly execution of theater reconnaissance missions approved in the previous month. GRIS is used by the Joint Staff and theater commands exercising operational control (OPCON) over airborne reconnaissance assets.

Evacuation System (EVAC)

EVAC collects and displays information about US citizens located outside the United States as collected by US State Department embassies and consulates. It accesses the database server via TELNET operation from a GCCS compatible client.

Fuel Resources Analysis System (FRAS)

FRAS provides fuel planners an automated capability for determining supportability of a deliberate or crisis action plan and for generating the time-phased bulk petroleum, oil and lubricants required to support an OPLAN. FRAS facilitates review of the fuel requirements of a proposed, new, or revised OPLAN and assesses adequacy of available resources to support crisis action planning.

Requirements can be generated and analysis performed for the overall OPLAN, regions within the OPLAN, by Service, and within Service by regions. Two or more OPLANs can be combined into a single OPLAN for analysis. The requirements generated can be varied through the use of intensity tables and consumption data extracted from the Logistics Factors File (LFF) or with Service-provided data system.

Global Status of Resources and Training (GSORTS)

GSORTS provides information on status of units with respect to personnel, equipment and training. Query and display capabilities include: categories of units (ships, fighter aircraft, ground forces, etc.); specific types of units (frigates, armor battalions, F-15s, etc.); and by specific unit (displays detailed status information).

Joint Maritime Command Information System (JMCIS)

JMCIS is the foundation for the GCCS fused operational battlespace picture. It provides near real-time sea and air tracks. JMCIS receives input from different systems, and can interface with other systems. JMCIS uses a core service, known as unified build, to provide geographic display, contact correlation, and track data base management.

Theater Analysis and Replanning Graphical Execution Toolkit (TARGET)

TARGET contains a set of planning tools designed to support the operational planner during crisis action procedures. These tools allow planners and operators to accomplish tasks through rapid access to required documents, information sources, analysis tools, multi-media and teleconferencing tools.

JOPES 2.7.2.8.1

Joint Deployable Intelligence Support System (JDISS)

JDISS applications provide the intelligence window to access national, theater, and tactical intelligence sources through the joint architecture for intelligence. It provides connectivity and interoperability with intelligence systems required to support forces during peacetime, crisis, and war. JDISS includes INTELINK at the Secret classification level (INTELINK-S). It is an intelligence dissemination service which enhances the sharing of intelligence information electronically over the SIPRNET. INTELINK provides intelligence dissemination using networked information discovery, retrieval, and browsing services. Its "point and click" technology makes intelligence products widely available to both users and producers of intelligence.

Air Tasking Orders (ATO)

ATO provides the capability to view and print selected portions of air tasking orders. A query function allows the user to tailor requests for information contained in a specified order for viewing. The query function also supports display of color-coded ground tracks for selected portions of the order. ATO interfaces with the Contingency Theater Automated Planning System (CTAPS).

JOPES 2.7.2.8

Conclusion

The Global Command and Control System is bringing the C4I for the Warrior vision into reality and the promise to provide warfighters with a fused, real-time picture of the battlespace. Ultimately, GCCS will provide command and control of our forces across the full range of military operations and through each phase of force projection.

GCCS gives the warfighter a highly flexible system capable of collecting, processing, disseminating and protecting information to support critical decision-making and to achieve unity of effort and command dominance. Interoperability has been the driving force in implementing GCCS. Common mission applications, databases, imagery, teleconferencing and open architecture are key tenets in providing a single joint Command and Control system. The system has been designated to grow to meet the needs of the warfighter of the future and the challenges of multiple regional conflicts._